

Amendment to the Specification:

Please replace paragraph [0008] with the following amended paragraph:

[0008] The image signal processing unit may include a decoder for extracting the vertical and horizontal synchronization signals from the composite image signal for raster scanning the image, ~~and~~ a read/write controller for synchronizing the vertical and horizontal synchronization signals with the position and the speed of the reflecting mirror unit, and a memory for buffering the color intensity signals.

Please replace paragraph [0015] with the following amended paragraph:

[0015] In one embodiment of the invention, the projection display system includes a light source unit and a scanning mirror system to project or illuminate a ~~pre-exist~~ preexisting image. The image can be an advertisement located on a wall, a screen, a sign, or a billboard. The image can also be located on a semi-transparent medium and be projected onto a medium to produce a larger image.

Please replace paragraph [0019] with the following amended paragraph:

[0019] FIG. 3 illustrates ~~the~~ an optical sensing unit for detecting the speed and position of the scanning mirror in one embodiment of the invention.

Please replace paragraph [0020] with the following amended paragraph:

[0020] FIG. 4 illustrates ~~the~~ an optical sensing unit comprising a ~~second~~ light source and an optical detector for detecting the speed and position of the horizontal scanning mirror in one embodiment of the invention.

Please replace paragraph [0023] with the following amended paragraph:

[0023] FIG. 7 is a block diagram of a system where ~~the~~ a laser projection display system is the light source for a light valve device such as a digital micromirror device (DMD), a liquid crystal on silicon (LCoS) display, or a liquid crystal display (LCD) in one embodiment of the invention.

Please add the following new paragraph after paragraph [0023]:

[0023.1] FIG. 8 illustrates a MEMS projection display where the image is projected from the same side of the viewer onto a screen in one embodiment of the invention.

Please replace paragraph [0024] with the following amended paragraph:

[0024] FIG. [[8]] 9 illustrates a MEMS projection display where the image is projected from the opposite side of the viewer onto a screen that is semi-transparent in one embodiment of the invention.

Please replace paragraph [0025] with the following amended paragraph:

[0025] FIG. [[9]] 10 illustrates a MEMS projection display that projects a semi-transparent image to create a larger image in one embodiment of the invention.

Please replace paragraph [0026] with the following amended paragraph:

[0026] FIG. [[10]] 11 illustrates a MEMS projection display that utilizes a mirror array to increase the image resolution and brightness of the projected image in one embodiment of the invention.

Please add the following new paragraph after paragraph [0026]:

[0026.1] FIG. 12 illustrates a flash light in one embodiment of the invention.

Please replace paragraph [0028] with the following amended paragraph:

[0028] FIG. 1A illustrates the image processing unit 10 in one embodiment. ~~The image~~ Image processing unit 10 includes (1) a decoder 11 for dividing a composite image signal into a composite synchronous signal, a red signal, a green signal, and a blue signal, (2) a signal separator 12 for separating the composite synchronous signal into a horizontal synchronization signal and a vertical synchronization signal, (3) a read/write controller 13 for controlling the light source unit 20 and synchronizing the vertical and the horizontal synchronization signals with the position and speed of reflecting mirror unit 60, and (4) a memory 14 for buffering the red, green, and blue signals.

Please replace paragraph [0029] with the following amended paragraph:

[0029] Referring back to FIG. 1, light source unit 20 emits red, green, and blue monochrome light beams. The monochrome light beams can travel in air or in optical fibers to optical modulation unit 30. Optical modulation unit 30 modulates the red, the green, and the blue monochrome light beams to achieve the desired hues and tones in response to the color intensity signals received from image processing unit 10. Optical ~~synthesized~~ synthesizing device 40 combines the light beams into one single light path before striking reflecting mirror unit 60. The combined light beam can travel in air or in an optical fiber to reflecting mirror unit 60. Reflecting mirror unit 60, which is capable of both

horizontal and vertical scans, reflects the combined light beam in a raster scan to project one or more two-dimensional image 90 (FIG. 3). Scanning mirror controller 50 drives reflecting mirror unit 60 in response to the vertical and horizontal ~~synchronous~~ synchronization signals received from image process unit 10.

Please replace paragraph [0031] with the following amended paragraph:

[0031] Optical ~~modulator~~ modulation unit 30 includes three optical modulators 35, 36, and 37 respectively receiving the red, green, and blue monochrome light beams. ~~The optical~~ Optical modulators 35, 36, and 37 may be acoustic-optic modulators, electro-optic modulators, or magneto-optic modulators. Alternatively as shown in FIG. 2, optical ~~modulator~~ modulation unit 30 may be a set of electrical circuitry 31 controlled by read/write controller 12 (FIG. 1A) of image processing unit 10. Optical modulator unit 30 then directly modulates the timing, duration, and intensity of the electrical driving pulses of light source unit 20 to change the hues and tones of the red, green, and blue monochrome light beams.

Please replace paragraph [0033] with the following amended paragraph:

[0033] In one embodiment, mirror sensing unit 70 is an optical detector/transducer 71 (Fig. 3) that detects the scanning speed and position of one of the ~~selected~~ monochrome light beam beams. Alternatively as shown in FIG. 4, sensing unit 70 may include an optical detector 72 and a solid state light source 73. Sensing unit 70 determines the horizontal scanning motion by detecting the light beam emitting from ~~the second~~ light source 73 and reflected by horizontal scanning mirror 61. Furthermore, sensing unit 70 may include an optical detector 74 and another solid state light source 75. Sensing unit 70 that determines the vertical scanning motion by detecting the light beam emitting from light source 75 and reflected by vertical scanning mirror 62.

Please replace paragraph [0038] with the following amended paragraph:

[0038] FIG. 7. shows a block diagram of a projection illumination system 200 that may be used as the light source for a digital projector 201 employing a light-valve device 291 such as digital micromirror device (DMD), liquid crystal display (LCD), or liquid crystal on silicon (LCoS) display. System 200 includes a signal processing unit 210, a light source unit 20, an optical synthesizing device 230, a scanning mirror controller unit ~~40~~ 50, and a reflecting mirror unit ~~50~~ 60. The red, green and blue monochrome light beams emitting from light source unit 20 is combined by optical synthesizing device 230 into a white light beam and projected onto reflecting mirror unit ~~50~~

60. Reflecting mirror unit 50 60 scans the white light beam horizontally and vertically to illuminate a two-dimensional area over optics 290 of digital projector 201. Optics 290 then directs the light beam onto light-valve device 291. Light-valve device 291 then modulates the light beam to project a desired image.

Please replace paragraph [0039] with the following amended paragraph:

[0039] FIG. 8 illustrates a MEMS projection illumination system 301 in one embodiment of the invention. System 301 includes a MEMS scanning light source that illuminates an image 302 on a medium 303. The MEMS scanning light source includes a plurality of solid state lasers emitting monochrome red, green and blue light beams ~~and that~~ are modulated and synthesized into a single light path in desired color. The single light path is raster scanned by MEMS scanning mirrors (e.g., a reflecting mirror system) onto medium 303. The scanned light beam reflects off image 302, which ~~become~~ becomes visible to passersby. The system is able to raster scan the entire medium 303 within the refresh rate of the human eyes so image 302 appears uniformly lighted. Image 302 can be any form of advertisement including text. Medium 303 can be a wall, a screen, a sign, or a billboard.

Please replace paragraph [0040] with the following amended paragraph:

[0040] FIG. 9 illustrates ~~[[a]]~~ MEMS projection illumination system 301 in another embodiment of the invention. System 301 includes a MEMS scanning light source that raster scans a light beam over an image 311. Image 311 is on a semi-transparent material 312 so the image is visible on both sides. Thus, image 311 is visible to a passerby on the opposite side of the system ~~310~~ 301. Image 311 can be part of a screen, a sign, or a billboard.

Please replace paragraph [0041] with the following amended paragraph:

[0041] FIG. 10 illustrates a MEMS projection illumination system 401 in one embodiment of the invention. System 401 includes a MEMS scanning light source that raster scans a light beam over a semi-transparent image 402 to project a larger image 403 onto a medium 404. Thus, MEMS projection illumination system 401 can replace the traditional light bulb in overhead projectors, slide machines, and LCD projectors to provide better performance and reliability, and lower power consumption.

Please replace paragraph [0042] with the following amended paragraph:

[0042] FIG. 11 illustrates a MEMS projection illumination system 501 in one embodiment of the invention. System 501 includes multiple MEMS scanning light sources 511 that are used to illuminate their respective portion of an image. Thus, system 501 is able to provide better illumination and higher resolution.